

REMARKS

Claims 1-15 are pending in this application.

Claims 1 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,435,676 to Murray et al. The rejections are respectfully traversed.

As shown in Fig. 3, the Murray et al. reference discloses a printer ink cartridge 40 including a body 42, a jet plate assembly 44, a plurality of electrical conductors formed into a flexible connector 46, a control and driver circuit 47 (Fig. 5), a memory storage element 48 (Fig. 5) and a plurality of electrical contacts 50. (Col. 4, ll. 34-40.) The jet plate assembly 44 may include a plurality of nozzles 74. (Col. 5, ll. 33-35.)

The Murray et al. reference teaches storing in the memory storage element 48 data related to the cartridge 40 (e.g., date of manufacture of the cartridge) and, more particularly, data related to the ink stored within the cartridge (e.g., ink type, lot number of the ink, and spectral analysis of the ink). (Col. 12, ll. 34-52.)

The Murray et al. reference makes no mention or suggestion of storing “data pertaining to said nozzles of said array” in the memory storage element 48.

Nonetheless, in support of the rejections of claims 1 and 6 under § 102(b), the Examiner asserts that a portion of the Murray et al. reference teaches “containing data pertaining to said nozzles of said array” in the printhead memory. (Office action, p. 2.) The portion of the Murray et al. reference cited by the Examiner is reproduced in its entirety below:

Further, by incorporating a memory storage element 48 on the cartridge 40, data regarding the approximate number of ink drops expelled from the cartridge 40 can be read from the memory storage element 49. As described above, the counter 89 counts the number of times a driver circuit 88 connected to one of the heating elements 72 is energized. From this approximate number of ink drops expelled, the printer can automatically determine the approximate amount of ink remaining in the cartridge 40 and warn the user if the ink supply is running low. Further, by counting the number of drops of ink that have been fired by the cartridge 40, the user can be warned when the cartridge 40 needs to be serviced and/or replaced. For example, if after two refills of ink the cartridge 40 needs to be serviced, once the stored number of drops of ink is indicative of two refills of ink, the user will receive a warning message indicating that service of the cartridge 40 is advised. Thus, the addition of the memory storage element 48 not only adds significant memory storage capabilities to the cartridge

40, but also enables the implementation of additional features to the cartridge 40.

(Col. 12, l. 53 – col. 13, l. 6.)

It is submitted that the cited portion of the Murray et al. reference makes no mention or suggestion of storing data pertaining to the nozzles. Indeed the cited portion makes no mention of nozzles whatsoever. Rather, the cited portion merely refers to storing in the memory storage element 48 data that refers to the approximate amount of ink remaining in the cartridge 40.

Accordingly, inasmuch as the Murray et al. reference fails to teach or suggest storing “data pertaining to said nozzles,” as required by claims 1 and 6 of the present application, it is submitted that the Murray et al. reference cannot, as a matter of law, anticipate pending claims 1 and 6. Withdrawal of the rejections of claims 1 and 6 under § 102(b) is respectfully requested.

Claims 2-5, 7-11 and 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Murray et al. reference in view of U.S. Patent No. 6,517,184 to Bruch et al. The rejections are respectfully traversed.

It is submitted that claims 2-5 and 7-8 are dependent upon allowable base claims and, therefore, for the reasons expressed above, are also allowable over the prior art of record.

It is also submitted that, for the reasons set forth below, the Examiner’s combination of the Murray et al. reference with the Bruch et al. reference fails to render obvious claims 2-5, 7-11 and 13-15.

The Bruch et al. reference discloses a method for servicing a printhead including identifying malfunctioning nozzles on the printhead during a detection operation, storing the results of the detection operation and servicing malfunctioning nozzles with a cleaner unit. The Bruch et al. reference does not, however, teach storing the results of the detection operation in a printhead memory on the printhead.

As discussed above, the Murray et al. reference simply teaches storing ink data in a memory storage element on a printer ink cartridge. The Murray et al. reference makes no mention or suggestion of storing nozzle data in the memory storage element, let alone missing nozzle map data. Nor does the Murray et al. reference contemplate the ability to store nozzle data in a memory device located on a printhead or the advantages of storing nozzle data in a memory device located on a printhead.

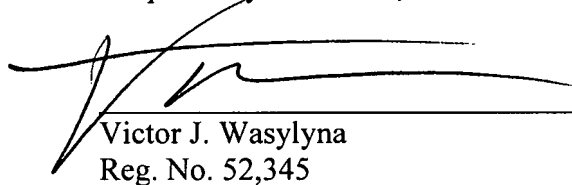
Accordingly, a person skilled in the art practicing the method taught by the Bruch et al. reference would not consider simultaneously practicing the teachings of the Murray et al. reference because the Murray et al. reference does not teach or suggest storing nozzle data in a memory storage element on a printer ink cartridge. Therefore, absent the hindsight gleaned from the disclosure of the present application, a person skilled in the art, aware of both the Murray et al. and Bruch et al. references, would have no reason to believe that nozzle data may be stored in a memory storage element on a printer ink cartridge.

In view of the foregoing, withdrawal of the rejections of claims 2-5, 7-11 and 13-15 under § 103(a) is respectfully requested.

Accordingly, it is submitted that the application is in condition for allowance and formal notice thereof is respectfully requested.

The Commissioner is hereby authorized to treat any paper that is filed in this application, which requires an extension of time, as incorporating a request for such an extension. (37 C.F.R. § 1.136(a)(3).) The Commissioner is further authorized to charge any fees required by this paper or to credit any overpayment to Deposit Account No. 20-0809.

Respectfully submitted,



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